Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. – 2. (cancelled)

3. (previously presented) An improvement in a method for communication in a computer network to a plurality of receivers comprising:

terminating a multicast session at an official release time associated with a multicast message with every member of a multicast group, including a sender and every intended receiver, by letting a receiver decide at the official release time that a multicast session has been successfully completed when all of the following conditions are met:

(i) neither the receiver nor a local communication manager has received any fault detection report from local or remote fault detectors, or where the receiver or local communication manager has received fault detection reports from the local and/or remote fault detectors, but judged that the faults detected could not have impacted the correctness of the multicast; and

(ii) the receiver has received the multicast message and returned an ACK-message; and

(iii) the receiver has not received any cancellation notice from the sender.

4. (previously presented) An improvement in a method for communication in a computer network to a plurality of receivers comprising:

terminating a multicast session at an official release time associated with a multicast message with every member of a multicast group, including a sender and every intended receiver, by letting the sender decide at the official release time that a multicast session has been successfully completed when all of the following conditions are met:

(i) Neither the sender nor the local communication manager has received any fault detection report from the local or remote fault detectors, or where the sender or the local communication manager has received fault detection reports from the local and/or fault detectors, but judged that the faults detected could not have impacted the correctness of the multicast about to be concluded; and

(ii) The sender has received an ACK-message from every intended receiver.

5. (previously presented) The improvement of claim 3 further comprising:

terminating a multicast session at an official release time associated with a multicast message with every member of a multicast group, including a sender and every intended receiver, by letting the sender decide at the official release

time that a multicast session has been successfully completed when all of the following conditions are met:

(i) Neither the sender nor the local communication manager has received any fault detection report from the local or remote fault detectors, or where the sender or the local communication manager has received fault detection reports from the local and/or fault detectors, but judged that the faults detected could not have impacted the correctness of the multicast about to be concluded; and

(ii) The sender has received an ACK-message from every intended receiver.

6. (cancelled)

7. (previously presented) An improvement in a method for communication in a computer network to a plurality of receivers comprising:

terminating a multicast session in every healthy member of a multicast group, including a sender and every intended receiver with the conclusion of the multicast session on the failure and the cancellation of the multicast session at or before arrival of an official release time associated with a multicast message by letting the sender decide at or before the official release time that a multicast session has been cancelled when at least one of the following conditions is met:

(i) The sender or a local communication manager has received fault detection reports from the local and/or remote fault detectors and

judged that the faults detected were in the local node and due to the faults detected, the multicast must be concluded as a failure and thus the sender has sent a cancellation notice to every intended receiver; or

(ii) The sender or a local communication manager has received fault detection reports from the local and/or remote fault detectors and judged that the faults detected were outside the local node and due to the faults detected, the multicast session must be concluded as a failure and thus the sender has sent a cancellation notice to every intended receiver.

8. (currently amended) An improvement in a method for communication in a computer network to a plurality of receivers comprising:

terminating a multicast session in every healthy member of a multicast group, including a sender and every intended receiver with the conclusion of the multicast session on the failure and the cancellation of the multicast session at or before arrival of an official release time associated with a multicast message by letting a receiver decide at or before the official release time that a multicast session has been cancelled when at least one of the following conditions is met:

(i) The receiver has received a cancellation notice from another receiver; or

(ii) the receiver becomes disabled after sending an ACK-message but before the official release time; or

(iii) The receiver or a local communication manager has received fault detection reports from local and/or remote fault detectors and judged

that the faults detected were in the local node and due to the faults detected, the multicast session must be concluded as a failure; or

(iv) The receiver or local communication manager has received fault detection reports from the local and/or remote fault detectors and judged that the faults detected were outside the local node and due to the faults detected, the multicast session must be concluded as a failure, and

~~The improvement of claim 6 further comprising:~~

terminating a multicast session in every healthy member of a multicast group, including a sender and every intended receiver with the conclusion of the multicast session on the failure and the cancellation of the multicast session at or before arrival of an official release time associated with a multicast message by letting the sender decide at or before the official release time that a multicast session has been cancelled when at least one of the following conditions is met:

(i) The sender or a local communication manager has received fault detection reports from the local and/or remote fault detectors and judged that the faults detected were in the local node and due to the faults detected, the multicast must be concluded as a failure and thus the sender has sent a cancellation notice to every intended receiver; or

(ii) The sender or a local communication manager has received fault detection reports from the local and/or remote fault detectors and judged that the faults detected were outside the local node and due to the faults detected, the multicast session must be concluded as a failure and thus the sender has sent a cancellation notice to every intended receiver.

9. – 12. (cancelled)

13. (previously presented) An improvement in a method for communication in a computer network to a plurality of receivers in a multicast session comprising the steps of:

transmitting a multicast message to said plurality of receivers from a sender through said computer network with information on an official release time included in the multicast message, wherein the official release time is chosen such that when both the sender and plurality of the receivers remain fault free during the multicast session, such that the probability of the multicast being completed before the official release time is at or above a predetermined level; and

terminating a multicast session at an official release time associated with a multicast message with every member of a multicast group, including a sender and every intended receiver, by letting a receiver decide at the official release time that a multicast session has been successfully completed when all of the following conditions are met:

(i) neither the receiver nor a local communication manager has received any fault detection report from local or remote fault detectors; and

(ii) The receiver has received the multicast message and returned an ACK-message; and

(iii) The receiver has not received any cancellation notice from the sender.

14. (previously presented) An improvement in a method for communication in a computer network to a plurality of receivers in a multicast session comprising the steps of:

transmitting a multicast message to said plurality of receivers from a sender through said computer network with information on an official release time included in the multicast message, wherein the official release time is chosen such that when both the sender and plurality of the receivers remain fault free during the multicast session, such that the probability of the multicast being completed before the official release time is at or above a predetermined level; and

terminating a multicast session at an official release time associated with a multicast message with every member of a multicast group, including a sender and every intended receiver, by letting the sender decide at the official release time that a multicast session has been successfully completed when all of the following conditions are met:

(i) Neither the sender nor a local communication manager has received any fault detection report from the local or remote fault detectors; and

(ii) The sender has received an ACK-message from every intended receiver.

15. (cancelled)

16. (previously presented) An improvement in a method for communication in a computer network to a plurality of receivers in a multicast session comprising:

transmitting a multicast message to said plurality of receivers from a sender through said computer network;

processing the transmitted multicast message in every receiver at or after a certain time defined as the official release time, which is chosen such that when both the sender and plurality of receivers remain healthy during the multicast session, the probability of the multicast being completed before the official release time is at or above a user selected level; and

terminating a multicast session at an official release time associated with a multicast message with every member of a multicast group, including a sender and every intended receiver, by letting a receiver decide at the official release time that a multicast session has been successfully completed when all of the following conditions are met:

(i) neither the receiver nor a local communication manager has received any fault detection report from local or remote fault detectors; and

(ii) The receiver has received the multicast message and returned an ACK-message; and

(iii) The receiver has not received any cancellation notice from the sender.

17. (previously presented) An improvement in a method for communication in a computer network to a plurality of receivers in a multicast session comprising:

transmitting a multicast message to said plurality of receivers from a sender through said computer network;

processing the transmitted multicast message in every receiver at or after a certain time defined as the official release time, which is chosen such that when both the sender and plurality of receivers remain healthy during the multicast session, the probability of the multicast being completed before the official release time is at or above a user selected level; and

terminating a multicast session at an official release time associated with a multicast message with every member of a multicast group, including a sender and every intended receiver, by letting the sender decide at the official release time that a multicast session has been successfully completed when all of the following conditions are met:

(i) Neither the sender nor the local communication manager has received any fault detection report from the local or remote fault detectors; and

(ii) The sender has received an ACK-message from every intended receiver.

18. – 21. (cancelled)

22. (previously presented) An improvement in a computer network including a plurality of receivers in a multicast session comprising:

means for transmitting a multicast message from a sender to said plurality of receivers through said computer network;

means for processing the received multicast message in said plurality of receivers only after a time defined as the official release time, which is chosen and sent to every receiver by the sender such that the multicast is cancelled, when the message cannot be delivered to a receiver after the sender makes a pre-determined number of attempts or when the sender becomes disabled before it can confirm the success of the multicast;

means for generating a cancellation notice by any member;

means for performing a cancellation step by all intended healthy receivers and the healthy sender before the official release time;

where the means for processing the transmitted multicast message in every receiver has completed processing the multicast when at least one of the following conditions is met:

(i) When the communication of the multicast message to the last one of said plurality of receivers is successfully completed; or

(ii) When the communication of the multicast message to any of the receivers fails;

and

means for terminating a multicast session at an official release time associated with the multicast message with every member of the multicast group, including the sender and every intended receiver, by letting a receiver decide at the official release time that a multicast session has been successfully completed when all of the following conditions are met:

(i) neither the receiver nor a local communication manager has received any fault detection report from local or remote fault detectors, or where the receiver or local communication manager has received fault detection reports from the local and/or remote fault detectors, but judged that the faults detected could not have impacted the correctness of the multicast; and

(ii) The receiver has received the multicast message and returned an ACK-message; and

(iii) The receiver has not received any cancellation notice from the sender.

23. (previously presented) An improvement in a computer network including a plurality of receivers in a multicast session comprising:

means for transmitting a multicast message from a sender to said plurality of receivers through said computer network;

means for processing the received multicast message in said plurality of receivers only after a time defined as the official release time, which is chosen

and sent to every receiver by the sender such that the multicast is cancelled, when the message cannot be delivered to a receiver after the sender makes a pre-determined number of attempts or when the sender becomes disabled before it can confirm the success of the multicast;

means for generating a cancellation notice by any member;

means for performing a cancellation step by all intended healthy receivers and the healthy sender before the official release time;

where the means for processing the transmitted multicast message in every receiver has completed processing the multicast when at least one of the following conditions is met:

(i) When the communication of the multicast message to the last one of said plurality of receivers is successfully completed; or

(ii) When the communication of the multicast message to any of the receivers fails;

and

means for terminating a multicast session at an official release time associated with the multicast message with every member of the multicast group, including the sender and every intended receiver, by letting the sender decide at the official release time that a multicast session has been successfully completed when all of the following conditions are met:

(i) Neither the sender nor the local communication manager has received any fault detection report from the local or remote fault detectors, or where the sender or the local communication manager has received

fault detection reports from the local and/or fault detectors, but judged that the faults detected could not have impacted the correctness of the multicast about to be concluded; and

(ii) The sender has received an ACK-message from every intended receiver.

24. (currently amended) An improvement in a computer network including a plurality of receivers in a multicast session comprising:

means for transmitting a multicast message from a sender to said plurality of receivers through said computer network;

means for processing the received multicast message in said plurality of receivers only after a time defined as the official release time, which is chosen and sent to every receiver by the sender such that the multicast is cancelled when the sender becomes disabled before it can confirm the success of the multicast;

means for generating a cancellation notice by any healthy member; and

means for performing a cancellation step by all intended healthy receivers before the official release time,

~~The improvement of claim 19~~ where the means for processing the transmitted multicast message in every receiver has completed processing the multicast when at least one of the following conditions is met:

(i) When the communication of the multicast message to the last one of said plurality of receivers is successfully completed; or

(ii) When the communication of the multicast message to any of the receivers fails

means for terminating a multicast session in every healthy member of a multicast group, including a sender and every intended receiver, with the conclusion of the multicast session on the failure and the cancellation of the multicast session at or before arrival of an official release time associated with a multicast message by letting a receiver decide at or before the official release time that a multicast session has been cancelled when at least one of the following conditions is met:

(i) The receiver has received a cancellation notice from ~~the sender~~ another receiver; or

(ii) The receiver or a local communication manager has received fault detection reports from local and/or remote fault detectors and judged that the faults detected were in the local node and due to the faults detected, the multicast session must be concluded as a failure; or

(iii) The receiver or local communication manager has received fault detection reports from the local and/or remote fault detectors and judged that the faults detected were outside the local node and due to the faults detected, the multicast session must be concluded as a failure.

25. (cancelled)

26. (previously presented) An improvement in a method for communication in a computer network to a plurality of receivers comprising:

transmitting a multicast message from a sender to said plurality of receivers through said computer network;

processing the received multicast message in said plurality of receivers only after a time defined as the official release time, which is chosen and sent to every receiver by the sender such that the multicast is cancelled when a receiver becomes disabled after sending an ACK-message but before the official release time;

generating a cancellation notice by the sender which has learned the failure of the receiver from local or remote fault detectors; and

performing a cancellation step by all intended healthy receivers and the healthy sender before the official release time.

27. – 28. (cancelled)

29. (currently amended) An improvement in a computer network including a plurality of receivers in a multicast session comprising:

means for transmitting a multicast message from a sender to said plurality of receivers through said computer network;

means for processing the received multicast message in said plurality of receivers only after a time defined as the official release time, which is chosen and sent to every receiver by the sender such that the multicast is cancelled

when the receiver becomes disabled after sending an ACK-message but before the official release time;

means for generating a cancellation notice by any member;

means for performing a cancellation step by all intended healthy receivers and the healthy sender before the official release time; and

~~The improvement of claim 28, further comprising:~~

means for terminating a multicast session at an official release time associated with a multicast message with every member of a multicast group, including a sender and every intended receiver, by letting a receiver decide at the official release time that a multicast session has been successfully completed when all of the following conditions are met:

(i) neither the receiver nor a local communication manager has received any fault detection report from local or remote fault detectors, or where the receiver or local communication manager has received fault detection reports from the local and/or remote fault detectors, but judged that the faults detected could not have impacted the correctness of the multicast; and

(ii) the receiver has received the multicast message and returned an ACK-message; and

(iii) the receiver has not received any cancellation notice from the sender.

30. (currently amended) An improvement in a computer network including a plurality of receivers in a multicast session comprising:

means for transmitting a multicast message from a sender to said plurality of receivers through said computer network;

means for processing the received multicast message in said plurality of receivers only after a time defined as the official release time, which is chosen and sent to every receiver by the sender such that the multicast is cancelled when the receiver becomes disabled after sending an ACK-message but before the official release time;

means for generating a cancellation notice by any member;

means for performing a cancellation step by all intended healthy receivers and the healthy sender before the official release time; and

~~The improvement of claim 28, further comprising:~~

means for terminating a multicast session at an official release time associated with the multicast message with every member of the multicast group, including the sender and every intended receiver, by letting the sender decide at the official release time that a multicast session has been successfully completed when all of the following conditions are met:

(i) neither the sender nor the local communication manager has received any fault detection report from the local or remote fault detectors, or where the sender or the local communication manager has received fault detection reports from the local and/or fault detectors, but judged that

the faults detected could not have impacted the correctness of the multicast about to be concluded; and

(ii) the sender has received an ACK-message from every intended receiver.

31. (previously presented) An improvement in a computer network including a plurality of receivers in a multicast session comprising:

means for transmitting a multicast message from a sender to said plurality of receivers through said computer network;

means for processing the received multicast message in said plurality of receivers only after a time defined as the official release time, which is chosen and sent to every receiver by the sender such that the multicast is cancelled, when the sender becomes disabled before it can confirm the success of the multicast;

means for generating a cancellation notice by any healthy member;

means for performing a cancellation step by all intended healthy receivers and the healthy sender before the official release time; and

means for terminating a multicast session at an official release time associated with a multicast message with every member of a multicast group, including a sender and every intended receiver, by letting a receiver decide at the official release time that a multicast session has been successfully completed when all of the following conditions are met:

(i) neither the receiver nor a local communication manager has received any fault detection report from local or remote fault detectors, or where the receiver or local communication manager has received fault detection reports from the local and/or remote fault detectors, but judged that the faults detected could not have impacted the correctness of the multicast; and

(ii) the receiver has received the multicast message and returned an ACK-message; and

(iii) the receiver has not received any cancellation notice from the sender.

32. (previously presented) An improvement in a computer network including a plurality of receivers in a multicast session comprising:

means for transmitting a multicast message from a sender to said plurality of receivers through said computer network;

means for processing the received multicast message in said plurality of receivers only after a time defined as the official release time, which is chosen and sent to every receiver by the sender such that the multicast is cancelled, when the sender becomes disabled before it can confirm the success of the multicast;

means for generating a cancellation notice by any healthy member;

means for performing a cancellation step by all intended healthy receivers and the healthy sender before the official release time; and

means for terminating a multicast session at an official release time associated with the multicast message with every member of the multicast group, including the sender and every intended receiver, by letting the sender decide at the official release time that a multicast session has been successfully completed when all of the following conditions are met:

(i) neither the sender nor the local communication manager has received any fault detection report from the local or remote fault detectors, or where the sender or the local communication manager has received fault detection reports from the local and/or fault detectors, but judged that the faults detected could not have impacted the correctness of the multicast about to be concluded; and

(ii) the sender has received an ACK-message from every intended receiver.

33. – 34. (cancelled)